

AMENDMENTS TO THE DRAWINGS

Figures 3, 8, and 9 have been amended to adjust teeth perspective. No new matter has been added. These drawings replace the previously filed drawings.

REMARKS

Applicant wishes to thank the Examiner for this sixth office action. Claims 1, 4, 8, and 38 have been amended. Claims 3, 5, and 6 have been cancelled. New claims 41-45 are presented.

Applicant respectfully suggests that amended claims 1 and 38 are properly allowable under 35 U.S.C. §112.

Claims 1, 3, 4, 12, 16-24, and 38 were rejected under 35 U.S.C. §102(b) as being anticipated by *White* (4489625). Applicant respectfully traverses this rejection. The Examiner argues that *White* discloses:

- A floating pinion gear (i.e., Fig. 8, element 116) driven by a radially unsupported pinion shaft mounted to the face gear, the floating pinion gear meshed with the first spur gear and the second spur gear, and the floating pinion gear mounted for rotation about a floating pinion axis of rotation which provides a resilient characteristic (i.e., Fig. 8; column 11, lines 26-43);

The Examiner fails to specifically identify a radially unsupported pinion shaft disclosed or suggested by *White*. In fact, the Examiner specifically avoids applying a reference numeral to the purported radially unsupported pinion shaft. The Examiner specifically refers to element 116 as a floating pinion gear. Applicant agrees that the drive pinion 116 floats freely between the two driven gears 117, its driving position set by the balance of two diametrically opposed mesh forces.

The embodiment of FIG. 7 illustrates how the inclination of the cross shafts 106 and 107 can be adjusted by alternate positions of the drive pinions 116 driven by the 25 second stage reduction bevel gears 115. In the lower half of FIG. 7, each of the two second stage reduction bevel gears 115 and attached pinions 116 is on a line joining the axes of the corresponding adjacent final drive pinions 108. When the axis of the drive pinion 116 30 is collinear with the axes of the two dual drive gears 117 it powers, equal load-sharing between the two meshes and, consequently, the two associated final drive pinions 108 can be effected by allowing the drive pinion 116 to float freely between the two driven gears 117, its 35 driving position set by the balance of two diametrically opposed mesh forces. Therefore, the dual drive ar-

[Col. 11, lines 23-37.]

White completely fails to disclose or suggest that the drive pinion 116 is mounted to a radially unsupported pinion shaft. The only apparently related side view of the Figure 7 embodiment is that of *White* Figure 8.

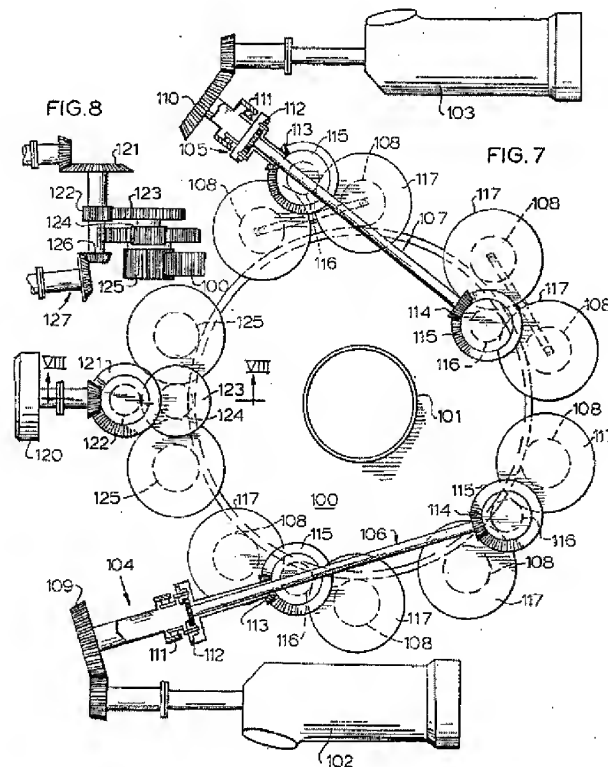


Figure 8 illustrates a third engine 120 and a tail rotor take off shaft 127 in a side view having a top view which appears generally similar to the top view of drive pinion 116 in Figure 7. ***Figures 7 and 8 in no way disclose or suggest a radially unsupported pinion shaft.*** Furthermore, nowhere within *White* is a radially unsupported pinion shaft disclosed or suggested by drive pinion 116 or what appears to be equivalent drive pinion 124. Applicant respectfully suggests that *White* fails to disclose or suggest a radially unsupported pinion shaft, said floating pinion gear mounted for rotation about a floating pinion axis of rotation which provides a resilient characteristic as recited in Applicant's claim 1. Since *White* fails to disclose or suggest this particular limitation, the rejection is thereby defeated. The claims are properly allowable over *White*.

Claims 5-11, 13-15, 26, 27, 39, and 40 were rejected under 35 U.S.C. §103(a) as being unpatentable over *White* in view of *Kish* (5813292). As the Examiner previously admits, *Kish* does not teach a floating pinion gear driven by radially unsupported pinion shaft which provides a resilient characteristic to allow the floating pinion axis of rotation to be displaceable off the common curve line to split a load between the first spur gear and the second spur gear. Whereas *White* fails to disclose a radially unsupported pinion shaft which provides a resilient characteristic as discussed above and the Examiner admits that *Kish* likewise fails to do so, *Kish* fails to cure the admitted deficiency of *White*. That is, even were the combination properly made – which it is not –, there are differences between the claimed invention and the teachings of the cited references so that the combination does not meet the limitations of Applicant's claims. Notably, it appears that the Examiner is utilizing *Kish* now only to teach the usage of first double helical gears and a relative size difference therebetween. Although *Kish* does teach helical gears, *Kish* as admitted by the Examiner and like *White*, fails to disclose or suggest any resilient characteristic. The claims are properly allowable.

New claims 41-45 recite further features of the present invention which are neither disclosed nor suggested by the cited references and are thus properly allowable. New Claims 41 and 45 generally recite:

a first spur gear periphery of said first spur gear and a second spur gear periphery of said second spur gear at least partially overlaps an output gear periphery of said output gear adjacent a first side of said output gear, and a face gear periphery of said face gear at least partially overlaps said output gear periphery adjacent a second side of said output gear.

Notably, *White* fails to disclose or suggest a face gear adjacent one side of the output gear 100 and a first and second spur gear adjacent an opposite side of the output gear 100 where the face gear and both spur gears define a periphery which overlap a periphery of the output gear 100. Applicant's novel gear arrangement beneficially provides a significantly more compact split torque gearbox system as further recited in these new claims.

Please charge \$150 to Deposit Account No. 19-2189 for 3 additional claims in excess of 20. If any additional fees or extensions of time are required, please charge to Deposit Account No. 19-2189.

Applicant respectfully submits that this case is in condition for allowance. If the Examiner believes that a teleconference will facilitate moving this case forward to being issued, Applicant's representative can be contacted at the number indicated below.

Respectfully Submitted,

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Dated: November 17, 2006

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